AMENDMENTS TO THE CLAIMS

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- 1. (**Original**) A process of increasing bone density in a mammalian patient suffering from a pathological condition in which bone density is decreased which comprises inhibiting the formation of a tertiary complex of IL-11, IL-11R, and gp130.
- (Original) The process of claim 1 which comprises administering to the patient an effective amount of a substance which inhibits, in vivo, the formation of a tertiary complex of IL-11, IL-11R, and gp130.
- 3. (**Previously Presented**) The process of claim 2 wherein the pathological condition is selected from the group consisting of: osteoporosis, metastatic bone cancer, myeloma, Paget's disease, and bone fracture.
- 4. (Withdrawn) The process of claim 2 wherein the substance is a mutant IL-11R.
- 5. (Withdrawn) The process of claim 4 wherein the substance is a mutant IL-11R with at least-one mutation in its gp130 binding region.
- 6. (Withdrawn) The process of claim 5 wherein the substance is a mutant IL-11R having at least one of the following mutations: D282→G282, A283→D283, G286→D286, H289→Y289, and V291→L291.
- 7. (Withdrawn) The process of claim 6 wherein the substance is a mutant IL-11R having the mutation H289→Y289.
- 8. (Withdrawn) The process of claim 4, wherein the substance is a soluble mutant IL-11R.
- 9. (Withdrawn) The process of claim 8 wherein the mutant IL-11R is a human IL-11R.
- 10. (Withdrawn) The process of claim 2 wherein the substance is an anti IL-11 antibody.
- 11. (Original) The process of claim 2 wherein the substance is an IL-11 binding peptide.

12. (Original) The process of claim 11 wherein the substance is an IL-11 binding peptide having an amino acid sequence which specifically binds IL-11 in the region normally bound by IL-11R.

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- 13. (Currently Amended) The process of claim 12, wherein the substance is a peptide comprising the sequence of SEQ ID NO: 5 Arg Arg Leu Arg Ala Ser Trp.
- 14. (Withdrawn) The process of claim 2 wherein the substance is a small molecule.
- 15. (Withdrawn) The process of claim 2 wherein the substance is an IL-11 antagonist.
- 16. (Withdrawn) The process of claim 2 wherein the substance is an IL-11R binding peptide.
- 17. (Withdrawn) The process of claim 2 wherein the substance is an anti IL-11R antibody which inhibits interactions between IL-11 and the IL-11R.
- 18. **(Withdrawn)** The process of claim 2 wherein the substance is an anti IL-11R antibody which inhibits interactions between IL-11R and gp130.
- 19. (Withdrawn) The process of claim 2 wherein the substance is an effective amount of transcribable genetic material which causes inhibition of the formation of the tertiary complex of IL-11, IL-11R, and gp130.
- 20. (Withdrawn) The process of claim 19 wherein the transcribable genetic material encodes an RNA sequence capable of inhibiting the translation of a component necessary to the formation of the IL-11/IL-11R/gp130 tertiary complex.
- 21. (Withdrawn) The process of claim 20 wherein the transcribable genetic material comprises DNA encoding an RNA sequence complementary to IL-11 mRNA.
- 22. (Withdrawn) The process of claim 20 wherein the transcribable genetic material comprises DNA encoding an RNA sequence complementary to IL-11R mRNA.
- 23. (Withdrawn) The process of claim 20 wherein the transcribable genetic material comprises

DNA encoding an RNA sequence complementary to gp130 mRNA.

24. (Withdrawn) The process of claim 19 wherein the transcribable genetic material comprises DNA encoding an amino acid sequence capable of inhibiting the formation of the IL-11/IL-11R, gp130 tertiary complex.

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- 25. (Withdrawn) The process of claim 24 wherein the transcribable genetic material encodes an IL-11R mutated to inhibit binding to gp130.
- 26. (Withdrawn) The process of claim 24 wherein the transcribable genetic material encodes an IL-11 binding peptide.
- 27. (Withdrawn) The process of claim 19, wherein the level of transcription of the transcribable genetic material is dependant on the concentration of an inducing compound.
- 28. (Original) The process of claim 1, in which the patient is a human.

29-39. (Cancelled)

40. (Original) Use of the peptide of claim 34 in reducing the formation of a tertiary complex of IL-11, IL-11R and gp130.

41-48. (Cancelled)

- 49. (Original) A process of increasing bone formation while decreasing bone resorption in a mammalian patient, which comprises inhibiting the formation of a tertiary complex of IL-11, IL-11R and gp130.
- 50. (Currently Amended) The process of claim 11, wherein the IL-11 binding peptide comprises the sequence of SEQ ID NO: 10 : Arg Arg Leu His Ala Ser Trp.
- 51. (Currently Amended) The process of claim 11, wherein the IL-11 binding peptide comprises the sequence of SEQ ID NO: 7 Arg Arg Leu X Ala Ser Trp and X is a basic amino acid.

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52. (Currently Amended) The process of claim 11, wherein the IL-11 binding peptide comprises the sequence of SEQ ID NO: 6 Ser Ile Leu Arg Pro Asp Pro Pro Gln Gly Leu Arg Val Glu Ser Val Pro Gly Tyr Pro.

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53. (Currently Amended) The process of claim 11, wherein the IL-11 binding peptide comprises the sequence of SEQ ID NO: 8 Ser Ile Leu Arg Pro Asp Pro Pro Gln Gly Leu Arg Val Glu Ser Val Pro Ser Tyr Pro.